

ABSTRACT

A thermosetting powder coating composition extruder system including an extruder body and an injection system is disclosed. The extruder body includes segments surrounding one or more rotating screws. A first segment's main inlet receives material, such as from a pre-mix hopper, and a final segment's outlet discharges extrudate. A low pressure injector injects additives, particularly those that are hard to incorporate, into one or more segments at one or more injection positions at the main inlet or between the main inlet and the outlet. The injector includes a source of pressurization coupled to a pressure vessel, a pressure regulator maintaining the pressure at or below a given level, a flow regulator, and an injection port. A sensor adjacent the outlet monitors the physical characteristics of the extrudate and is coupled to a controller of the low pressure injector for dynamic control thereof.